Response filed September 10, 2004 to April 21, 2004 Office Action Ser. No. 09/939,406 Atty. Docket No. 1662/49603

IN THE CLAIMS

1. (Currently amended) A method for preparing a compound of the formula

$$R^2-N$$
 $N-R^1$
 R^3

IV

wherein R¹ denotes phenylalkoxy, tosyl, benzoyl, or formyl; R² denotes alkyl, alkoxy, phenyl, phenyloxy or phenylalkoxy; and R³ denotes phenyl,

comprising the step of reacting a compound of the formula

$$R^{2}$$
 R^{2}
 R^{3}
 V

wherein R² and R³ are as defined above and R⁴ and R⁵ are independently selected from the group consisting of fluoro, chloro, bromo and iodo,

with a compound of the formula H₂N-R¹, wherein R¹ is as defined above.

- 2. (Previously presented) The method of claim 1, wherein R¹ is selected from the group consisting of formyl, benzoyl, and tosyl.
- 3. (Original) The method of claim 1, wherein R¹ is tosyl.
- 4. (Original) The method of claim 1, wherein R^2 is methyl.
- 5. (Canceled)
- 6. (Original) The method of claim 1, wherein R⁴ is chloro.
- 7. (Original) The method of claim 1, wherein R⁵ is chloro.

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- 8. (Original) The method of claim 1, wherein the reaction is performed in a solvent selected from the group consisting of DMF, DMAC, ethers, ethyleneglycol dimethyl ether, diethyleneglycol dimethyl ether, propyleneglycol dimethyl ether, DMSO, xylene, benzene, ethylbenzene, acetonitrile and toluene.
- 9. (Original) The method of claim 8, wherein said solvent is DMF.
- 10. (Original) The method of claim 1, further comprising the step of adding a strong base.
- 11. (Original) The method of claim 10, wherein said strong base is selected from the group consisting of sodium hydroxide, sodium hydride, potassium hydroxide, potassium hydride, sodium methoxide and sodium amide.
- 12. (Original) The method of claim 11, wherein the base is sodium hydroxide.
- 13. (Original) The method of claim 11, wherein the base is sodium hydride.
- 14. (Original) The method of claim 1, further comprising the step of removing R¹ by hydrolysis.
- 15. (Original) The method of claim 14, wherein R¹ is removed by hydrolysis using a strong acid.
- 16. (Original) The method of claim 15, wherein the acid is selected from the group consisting of sulfuric acid, hydrochloric acid, phosphoric acid and p-toluene sulfonic acid.
- 17. (Original) The method of claim 16, wherein the acid is sulfuric acid.
- 18. (Original) The method of claim 17 wherein the sulfuric acid has a concentration of about 98%.

19-48. (Canceled)

49. (Previously presented) A compound of the formula:

$$R^2-N$$
 $N-R^1$
 R^3

IV

wherein R¹ denotes tosyl, formyl, or benzoyl; R² denotes methyl; and R³ denotes phenyl.

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- 50. (Canceled)
- 51. (Canceled)
- 52. (Canceled)
- 53. (Canceled)
- 54. (Canceled)
- 55. (Canceled)
- 56. (Canceled)
- 57. (Canceled)
- 58. (Canceled)
- 59. (Canceled)
- 60. (Canceled)
- 61. (Canceled)
- 62. (Canceled)
- 63. (Canceled)
- 64-67. (Canceled)
- 68. (Currently amended) A method for preparing 4-methyl-2-phenylpiperazine comprising hydrolyzing the a compound of claim 49 using an acid.
- 69. (Previously presented) The method of claim 68, wherein the acid is sulfuric acid.
- 70. (Currently amended) A method for preparing 3-eyano-2-(4-methyl-2-phenyl-1-piperazynyl) 3-cyano-2-(4-methyl-2-phenyl-1-piperazinyl) pyridine comprising:

hydrolyzing the <u>a</u> compound of claim 49 to form 4-methyl-2-phenylpiperazine; and reacting 4-methyl-2-phenylpiperazine with a 3-cyano-pyridine to form 3-cyano-2-(4-methyl-2-phenyl-1-piperazynyl) <u>3-cyano-2-(4-methyl-2-phenyl-1-piperazinyl)</u> pyridine.

71. (Currently amended) A method for preparing mirtazapine comprising the steps of: hydrolyzing the <u>a</u> compound of claim 49 to form 4-methyl-2-phenylpiperazine; reacting 4-methyl-2-phenylpiperazine with a 3-cyano-pyridine to form 3-cyano-2-(4-methyl-2-phenyl-1-piperazinyl) pyridine;

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converting 3-cyano-2-(4-methyl-2-phenyl-1-piperazinyl) pyridine to 3-carboxy-2-(4-methyl-2-phenyl-1-piperazinyl) pyridine; and

converting 3-carboxy-2-(4-methyl-2-phenyl-1-piperazinyl) pyridine to mirtazapine.

72. (Currently amended) A compound of the formula:

$$R^2-N$$
 $N-R^1$
 R^3

IV

wherein R¹ denotes phenylalkoxy, tosyl, benzoyl, or formyl; R² denotes alkyl, alkoxy, phenyl, phenyloxy or phenylalkoxy; and R³ denotes phenyl.

- 73. (Previously presented) The compound of claim 72, wherein R¹ is formyl, benzoyl, or tosyl.
- 74. (Canceled)
- 75. (Previously presented) The compound of claim 72, wherein R^2 is methyl.
- 76. (Currently amended) The compound of claim 72, wherein R^1 is tosyl and R^2 is alkyl.